REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicants thank the Examiner for carefully considering this application, acknowledging that the certified copies of the priority documents have been received, and indicating that the drawings filed on July 17, 2006, are accepted.

Disposition of Claims

Claims 1-5 were pending in this application. Claim 5 is canceled by way of this reply without prejudice or disclaimer. Thus, claims 1-4 are pending in this application. Claims 1 and 2 are independent. The remaining claims depend, either directly or indirectly, from claim 2.

Specification Amendments

Section headings and paragraphs [0015]-[0031] of the specification are added by way of this reply. No new matter is added by these amendments, as support for these amendments may be found, for example, in paragraphs [0016], [0041], [0052], [0068], [0069], [0070], [0072], [0075], [0076], [0080], [0081], [0085], [0086], and [0087] and FIG. 10 of the Instant Specification as published.

Claim Amendments

Claims 1 and 2 are amended to clarify aspects of the invention. No new matter is added by these amendments as support for the amendments may be found, for example, in paragraphs [0046], [0050], [0051], [0091], and [0092] of the Instant Specification as published. Further, claim 3 is hereby amended to address an antecedent basis issue as requested by the Examiner. A

clean version of the amended claims is also attached for the Examiner's convenience as requested by the Examiner. *See* Office Action dated May 28, 2008, page 8.

Claim Objections

As requested by the Examiner, claim 3 is amended to correct its dependent form, such that it further limits the subject matter of claim 2. Applicants assert no new subject matter has been introduced by way of this amendment. In view of this, the Examiner's objection with respect to claim 3 is now moot and should be withdrawn.

Rejection(s) under 35 U.S.C. § 101

Claims 1-5 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. More specifically, the Examiner rejected claims 1-5 for failing to produce a useful, concrete, and tangible result. Claim 5 is canceled by this reply, so the rejection is now moot with respect to the canceled claim. To the extent the rejection may apply to the remaining claims, the rejection is traversed.

Claims 1 and 2 are amended to recite, in part, "generating a plan based on the coupled simulation, wherein the plan is *implemented to improve production of the multi-platform reservoir*." Applicants respectfully assert that because amended independent claims 1 and 2 require the generation of a plan used to improve production, amended independent claims 1 and 2 provides a useful, concrete, and tangible result. Accordingly, amended independent claims 1 and 2 are directed towards statutory subject matter. Claims 3 and 4 depend either directly or indirectly from claim 2 and, thus, comply with the statutory subject matter requirement of 35 U.S.C. §101 for at least the same reasons as claim 2. Accordingly, withdrawal of this rejection is requested.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 1-5 are rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter that the applicants regard as the invention. Claim 5 is canceled by this reply, so the rejection is now moot with respect to the canceled claim. To the extent the rejection may apply to the remaining claims, the rejection is traversed.

The Examiner contends that claims 1 and 2 recite "converting the hydrocarbon fluid streams between different sets of pseudo components," but that it is unclear how such conversion is performed. Applicants respectfully disagree. Claims 1 and 2 are amended by way of this reply to recite, in part, "converting each of the hydrocarbon fluid streams to a fluid model of a controller based on corresponding pseudo-components used in the network simulators." The specification clearly describes how reservoir simulations may be coupled. *See* Instant Specification, paragraph [0088]. Further, the specification describes how fluid streams of the reservoir simulations may be converted to a controller's fluid model. *See* Instant Specification, paragraph [0091]. From this description, one skilled in the art would appreciate that the hydrocarbon fluid streams are converted to the controller's fluid model to facilitate coupling.

Furthermore, the Examiner asserts that claim 3 recites "applying production and injection constraints," but that it is unclear how such constraints are applied. Applicants disagree. Claim 3 is amended by way of this reply to recite, in part, "applying production and injection constraints to the coupled simulation by apportioning the production and injection constraints between the network simulators." The specification describes how global constraints are applied by apportioning them between simulation tasks. *See* Instant Specification, paragraph [0051]. In other words, the specification describes how the constraints are applied to the simulations

obtained from the network simulators. *See id.* From this description, one skilled in the art would appreciate that the constraints are applied by apportioning them between the simulators.

In view of the above, independent claims 1-4 satisfy 35 U.S.C. § 112, second paragraph. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1-5 stand rejected under 35 U.S.C. § 102 as being anticipated by Briens et al., *Application of Sequential Staging of Tasks to Petroleum Reservoir Modeling* ("Briens"). Claim 5 is canceled by this reply, so the rejection is now moot with respect to the canceled claim. To the extent the rejection may apply to the remaining claims, the rejection is traversed.

"A claim is anticipated only if *each and every element* as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) (emphasis added). Further, "[t]he identical invention must be shown in as complete detail as is contained in the claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). The Applicants respectfully assert that Briens does not expressly or inherently describe each and every element of independent claims 1 and 2.

Amended independent claims 1 and 2 recite, in part, "converting each of the hydrocarbon fluid streams to a fluid model of a controller based on corresponding pseudo-components used in the network simulators." Thus, the claims clearly require, in part, the conversion of fluid streams to a controller's fluid model based on pseudo-components. *See* Instant Specification, paragraphs [0091]-[0092].

In contrast, Briens only discloses that reservoir fluid is described as a mixture of hydrocarbon and non-hydrocarbon components. *See* Briens, page 428, introduction. In other words, Briens discloses that the components of a *single* fluid simulation may be apportioned among parallel computers. *See* Briens, page 428, abstract. However, Briens fails to disclose converting fluid streams of *multiple* simulators to a common fluid model. In view of this, it is clear that apportioning a single simulation as in Briens is *not* equivalent to converting fluid streams to a common fluid model as recited in independent claims 1 and 2.

Furthermore, amended independent claims 1 and 2 recite, in part, "obtaining a coupled simulation using the converted hydrocarbon fluid streams." In contrast, Briens only discloses a system for improving the performance of large-scale simulations by using sequential staging of tasks. *See* Briens, page 429, column 1 at first full paragraph. For example, the sequential staging of Briens discloses how the processes in an iterative simulation technique (slice successive over relaxation) may be distributed among multiple processors. *See* Briens, page 431, column 1 at first full paragraph. However, Briens fails to disclose that multiple fluid stream simulations are combined to obtain a coupled simulation. In view of this, it is clear that sequential staging as in Briens is not equivalent to obtaining a coupled simulation as recited in independent claims 1 and 2.

In view of the above, Briens fails to disclose all the limitations of amended independent claims 1 and 2. Thus, amended independent claim 1 is patentable over Briens. Dependent claims 3 and 4 are patentable for at least the same reasons as the aforementioned amended independent claims. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicants believe this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 09469/161002; 94.0052-US-PCT).

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Respectfully submitted,

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Attachment (Clean Version of the Amended Claims)

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